



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/583,817 | 12/08/2008 | Lars Jorneus | NOBELB.244NP | 8735 |

20995 7590 12/19/2011
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

| |
|----------|
| EXAMINER |
|----------|

EIDE, HEIDI MARIE

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3732

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

12/19/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
eOAPilot@kmob.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/583,817
Filing Date: December 08, 2008
Appellant(s): JORNEUS ET AL.

Nathan S. Smith
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 7, 2011 appealing from the Office action mailed February 8, 2011.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1-2, 5-9, and 13-21

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

NEW GROUND(S) OF REJECTION

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The applicant has added new claims 17 and 21 which include the limitation of "greater than 20% of a given groove and/or recess is inclined relative to the longitudinal axis of the implant". Support for a pattern of grooves and/or recesses, wherein some, for example more than 20%, of the grooves and/or recesses are inclined relative to the longitudinal axis can be found, however, support for more than *20% of a single groove and/or recess* being inclined relative to the longitudinal axis cannot be found. The specification does not describe less than 100% of a single groove and/or recess inclined relative to the longitudinal axis.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

Art Unit: 3732

| | | |
|--------------|----------------|---------|
| 6,364,663 | Dinkelacker | 4-2002 |
| 2004/0121286 | Aravena et al. | 7-2004 |
| 6,283,754 | Wohrle | 11-2001 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The applicant has added new claims 17 and 21 which include the limitation of "greater than 20% of a given groove and/or recess is inclined relative to the longitudinal axis of the implant". Support for a pattern of grooves and/or recesses, wherein some, for example more than 20%, of the grooves and/or recesses are inclined relative to the longitudinal axis can be found, however, support for more than *20% of a single groove and/or recess* being inclined relative to the longitudinal axis cannot be found. The specification does not describe less than 100% of a single groove and/or recess inclined relative to the longitudinal axis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 6-9, 13-14, 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,417,491 in view of Dinkelacker (6,364,663).

Ricci teaches a dental implant for inserting into a hole formed in a jaw bone and exposure to an impinging force or impinging forces, the dental implant comprising a threaded lower portion 46 and a collar 152 or one or more peripherally extending

Art Unit: 3732

surface 152 which are arranged at an upper portion of the dental implant above the threaded lower portion and are configured to be placed against a jaw bone part at an outlet opening of the hole (fig. 27), wherein the one or more peripherally extending surfaces are provided with a pattern of grooves and recesses (col. 7, ll. 1-11, col. 11, ll. 6-18), the pattern of grooves and recesses including grooves and recesses extending in at least two directions of inclination (fig. 6). Ricci teaches the invention a substantially claimed and discussed above, however, does not specifically teach at least a portion of the pattern of grooves and recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant and wherein the grooves and recesses have a depth which lies in the range of about 50-100 μm and a width in the ranges of about 100-150 μm .

Dinkelacker teaches a dental implant wherein a pattern of grooves and recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant (fig. 8, 13, col. 2, ll. 8-19) and wherein the grooves and recesses have a depth which lies in the range of about 50-100 μm and a width in the ranges of about 100-150 μm (col. 3, ll. 40-45). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the implant taught by Ricci with the size and arrangement of the pattern of grooves and recesses in order to secure against axial shifting and rotation of the implant after healing.

With respect to claims 2 and 20, Ricci further teaches wherein the pattern of grooves and recesses forms a closed loop that divides an upper part and a lower part of

Art Unit: 3732

the upper portion of the implant capable of preventing ingress of bacteria from the upper portion to a lower portion of the implant (figs. 1-6, the horizontal grooves/recess form a closed loop and are capable of preventing bacteria from traveling vertically downward towards the lower portion of the implant). With respect to claim 6, Ricci further teaches the pattern comprises straight and parallel groove parts with at least two directions of inclination, the pattern being arranged around all of the one or more peripheral surface (fig. 6, 27). With respect to claims 9 and 14, Ricci further teaches wherein the peripherally extending surfaces are formed on a flange arrangement (fig. 27) and wherein the flange arrangement is cylindrical (fig. 27). With respect to claims 17 and 21, Ricci further teaches wherein greater than 20% of a given groove is inclined relative to the longitudinal axis of the implant (fig. 1, all of the groove, i.e. 100% is inclined 90 degrees from the longitudinal axis). With respect to claims 18 and 22, Ricci further teaches wherein the grooves of the pattern intersect with each other (fig. 6). Ricci teaches the invention as substantially claimed and discussed above, however, does not specifically teach wherein when the implant is exposed to forces with mutually different directions, a first part of the groove is substantially at right angles in relation to a first force direction and a second part of the patter is substantially at right angles in relation to a second force direction.

Dinkelacker teaches wherein when the implant is exposed to forces with mutually different directions, a first part of the groove is substantially at right angles in relation to a first force direction and a second part of the patter is substantially at right angles in relation to a second force direction. It would have been obvious to one having ordinary

Art Unit: 3732

skill in the art at the time of the invention to modify the implant taught by Ricci with the arrangement of the pattern of grooves and recesses in order to secure against axial shifting and rotation of the implant after healing. With respect to claims 7-8

Ricci/Dinkelacker does not specifically teach the pattern comprises sinusoidal groove recess parts and where the pattern comprises one or more groups of groove arranged mutually parallel with different longitudinal extents, however, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to arrange the grooves as claimed because Applicant has not disclosed that pattern provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Ricci/Dinkelacker implant, and applicant's invention, to perform equally well with either pattern taught by Ricci/Dinkelacker or the claimed pattern because both patterns would perform the same function of promoting bone growth. Therefore, it would have been prima facie obvious to modify Ricci/Dinkelacker to obtain the invention as specified in claims 7-8 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Ricci/Dinkelacker.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,419,491) in view of Dinkelacker (6,364,663) as applied to claim 1 above, and further in view of Aravena et al. (2004/0121286).

Ricci/Dinkelacker teaches the invention as substantially claimed and discussed above, however, does not specifically teach an upper portion has an inner socket which

Art Unit: 3732

is polygonal, toothed or with two or more wings and the grooves are arranged at the parts of greater material thickness at the upper portion.

Aravena teaches an upper portion having an inner socket 28 which is polygonal (fig. 2) and the grooves 22 are arranged at part of greater material thickness at the upper portion (par. 26). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the implant taught by Ricci/Dinkelacker with an inner socket taught by Aravena in order to allow for an anti-rotation attachment feature for an abutment.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,419,491) in view of Dinkelacker (6,364,663) as applied to claim 9 above, and further in view of Wöhrle (6,283,754).

Ricci/Dinkelacker teaches the invention as substantially claimed and discussed above, however, does not specifically teach the flange arrangement is conical or scalloped.

Wöhrle teaches an implant with a flange arrangement which is conical and scalloped (figs. 6-7, 9-12). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the shape of the flange taught by Ricci/Dinkelacker with the shape taught by Wöhrle in order to follow the natural occurring bone morphology.

(10) Response to Argument

Appellant's arguments with respect to the objections of the specification are persuasive and have been removed.

Appellant argues that the combination of Ricci in view of Dinkelacker is improper because Dinkelacker does not teach the grooves on the collar of the implant. However, it is noted that the prior art of Ricci teaches grooves on a collar which interact with the bone and Dinkelacker teaches crosswise grooves interacting with the bone. Therefore the location of grooves on a collar are taught by the prior art of Ricci and the orientation of the grooves are being modified by Dinkelacker. Although the portion of the implant called a "collar" (104) is taught by Dinkelacker, it for placement in the gum tissue (see fig. 18) not the bone, the grooves located on collar portion 152 of Ricci are for placement in the bone (see col. 11, ll. 9-13 of Ricci). Thus, one of ordinary skill in the art would have looked to the teachings associated with the implant portion of Dinkelacker that interacts with bone, as the collar of Ricci does, when looking to modify the grooves in Ricci's collar. Therefore, the combination of the grooves taught by Dinkelacker with Ricci is proper since the grooves of both implants are interacting with the bone. It is further noted that the prior art of Dinkelacker teaches longitudinally orientated grooves (see figure 1 of Dinkelacker) which are also taught by Ricci. Appellant further argues the prior art does not discuss or acknowledge the technical effect of increasing resistance to forces directed at an incline in relation to the implant, however, it is noted that the prior art teaches the same structure, therefore the structure will have the same technical effect. Appellant further argues that the prior art does not

Art Unit: 3732

teach the grooves extend at substantially right angles in relation to a force, however, this limitation is a functional limitation and depending on how the implant is positioned in its implanted position and the direction of the forces, the grooves and force are capable of extending at right angles with respect to each other. This limitation was illustrated in the annotated figure in the previous office action. Appellant further argues hindsight was used in combining the references however, it is noted that in col. 2, ll. 16-19 and col. 6, ll. 26-35 of Dinkelacker teaches the grooves being used for collecting osteons to help secure the implant. With respect to claims 17 and 21 it is noted that the prior art of Ricci teaches 100% of a single groove, which is greater than 20%, is inclined relative to the longitudinal axis (it is inclined by 90 degrees).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR

Art Unit: 3732

41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/HEIDI M EIDE/
Examiner, Art Unit 3732

Conferees:

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732

/Michael J. Hayes/
TQAS, TC 3700

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

/ANGELA D. SYKES/

Director, Technology Center 3700